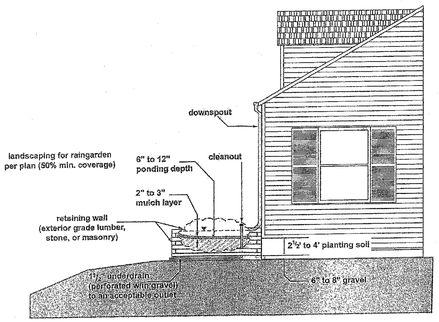
Option 3. Raingardens – Profile View



GUIDANCE FOR BUILDING RAINGARDENS

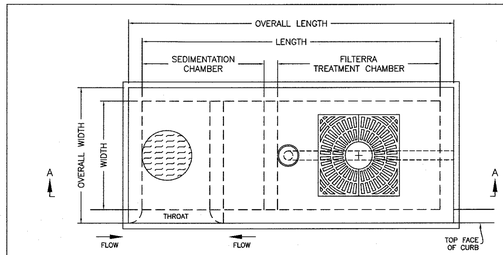
Raingardens are small-scale practices designed to treat stormwater by using planting soils and vegetation to filter runoff. Raingardens are versatile and may be used in areas with limited space or steep slopes. This method may be used as an alternative for the front yard, back yard, or both in areas with steep slopes, small lots, or other constraints to provide adequate treatment of all proposed impervious surfaces.

TREATMENT REQUIREMENTS

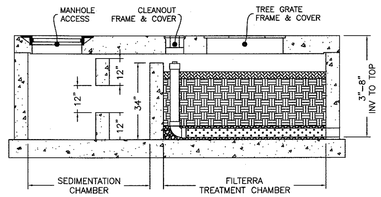
To be considered for stormwater management, the following conditions must be met:

1. The maximum drainage area to each raingarden cannot exceed 1,000 square feet.
2. Raingardens shall consist of the following components:
   a. A 2½ to 4-foot deep planting soil bed,
   b. A surface mulch layer, and
   c. A ½ to 1-foot deep surface ponding area.
3. A minimum 1½ -inch perforated pipe underdrain in a gravel layer shall be provided unless waived by the local approval authority. The underdrain shall be located at the invert of the raingarden and provide a non-erosive discharge to an acceptable outlet.
4. A landscaping plan that covers at least 50% of the surface area of the raingarden shall be provided (see Landscaping Details).
   a. Native plants are recommended over non-native species,
   b. Plants should be selected based on tolerance zones,
   c. A selection of trees or shrubs should be included in the plan, and
   d. Woody vegetation should not be located at inflow locations.
5. The contributing drainage area shall be stabilized prior to installation.
6. The raingarden shall be located to prevent basement or foundation seepage, erosion, or flooding of adjacent properties.

STANDARD STORMWATER MANAGEMENT PLAN - OPTION 3 ..... PAGE 2



PLAN VIEW



CROSS SECTION

UNIT DESIGNATION	OVERALL DIMENSIONS	FILTERRA TREATMENT AREA	LENGTH	WIDTH	OUTLET PIPE
FTSC 12' x 4'	13' x 5'	6' x 4'	12'-0"	4'-0"	4" PVC
FTSC 16' x 4'	17' x 5'	8' x 4'	16'-0"	4'-0"	4" PVC
FTSC 12' x 6'	13' x 7'	6' x 6'	12'-0"	6'-0"	4" PVC
FTSC 16' x 6'	17' x 7'	8' x 6'	16'-0"	6'-0"	4" PVC
FTSC 19' x 6'	20' x 7'	10' x 6'	19'-0"	6'-0"	6" PVC
FTSC 20' x 8'	21' x 9'	10' x 8'	20'-0"	8'-0"	6" PVC
FTSC 22' x 8'	23' x 9'	11' x 8'	22'-0"	8'-0"	6" PVC

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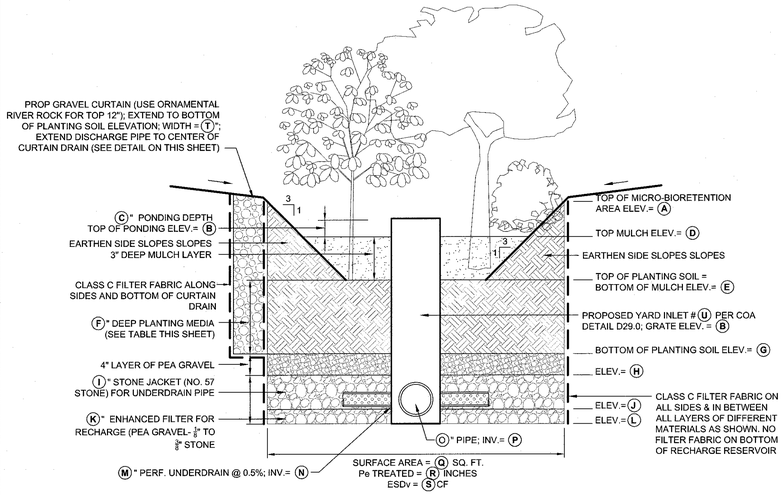


MICRO-BIORETENTION AREA TYPICAL DETAIL (M-6)

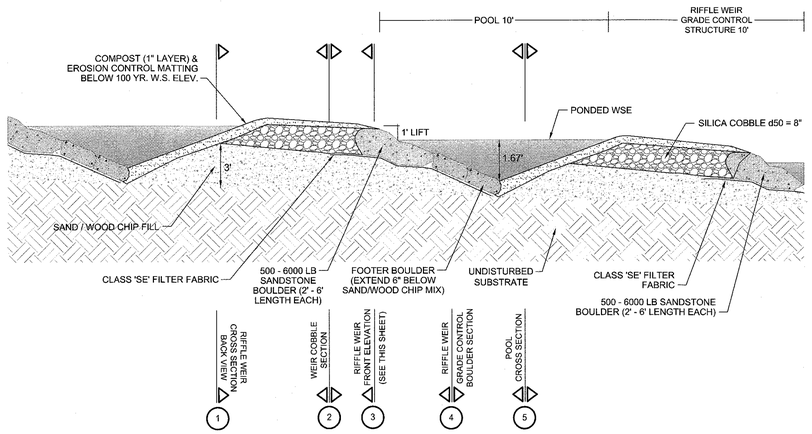
SCALE: NONE

RAISE RAIN GARDENS - TOWNHOMES (TYPICAL)

SCALE: NONE

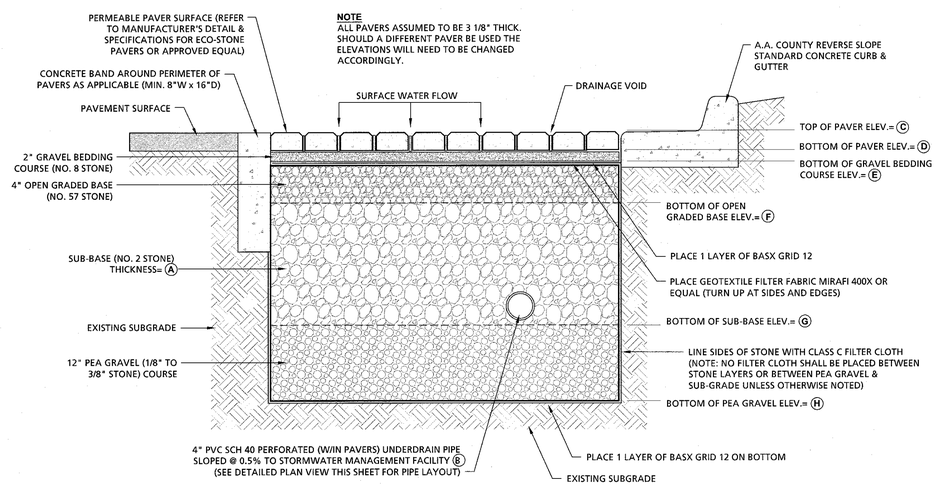
PRELIMINARY NOTE:

DETAILS SHOWN HEREON ARE CONCEPTUAL TO DEPICT PROPOSED STORMWATER MANAGEMENT FEATURES PROPOSED FOR THE PROJECT. FURTHER DETAILS AND NOTES WILL BE PROVIDED AFTER PRELIMINARY APPROVAL.



STEP POOL STORMWATER CONVEYANCE TYPICAL WEIR / POOL PROFILE INDEX

SCALE: NONE



PERMEABLE PAVEMENT AREA TYPICAL (A-2)

SCALE: NONE

ADD ALTERNATE:

CONTRACTOR/OWNER RESERVES THE RIGHT TO SUBSTITUTE PERMEABLE PAVERS WITH PERMEABLE PAVEMENT OR PERMEABLE CONCRETE WITH DESIGN ENGINEERS APPROVAL.

Revisions

Rev. #	By	Date	Description

I hereby certify that the documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

Terry Schuman — Date 3/31/16
19593 — License No. — Expiration Date

Bay Engineering Inc.
Engineers, Planners and Surveyors
2661 Riva Road, Building 800
Annapolis, Maryland 21401
410.897.9290
410.897.9291 fax
email@baysengineering.com
www.bayengineering.com

Date DECEMBER 2014
Job Number 10-3572
Scale AS SHOWN
Drawn By L.S.
Approved By T. SCHUMAN
Folder Reference HAYES PROPERTY, OLD SOLOMONS ISLAND ROAD, ANNAPOLIS

STORMWATER MANAGEMENT DETAILS & SPECIFICATIONS

SITE DEVELOPMENT PLANS FOR

ANNAPOLIS TOWNES AT NEAL FARM

TAX MAP 51A, BLOCK 24, PARCELS 6, 8, AND 45
TAX MAP 51D, BLOCK 19, PARCEL 60, LOT 10
TAX MAP 51D, BLOCK 6, PARCELS 70, 391, AND 392
OLD SOLOMONS ISLAND ROAD, ANNAPOLIS
ANNAPOLIS, MARYLAND 21401
SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED R4 / R1B / B2 CITY

Sheet No. C10 OF 10

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